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10/034,115	01/03/2002	Yasuhiro Mizutani	461-46	8422

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EXAMINER

AMARI, ALESSANDRO V

ART UNIT PAPER NUMBER

2872

DATE MAILED: 08/20/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/034,115

Applicant(s)

MIZUTANI ET AL.

Examiner

Alessandro V. Amari

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-- The MAILING DATE of this communication appears on the cover sheet with the corresponding address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-10, 12 and 13 is/are rejected.
- 7) ☒ Claim(s) 11 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. The claims are objected to because the lines are crowded too closely together, making reading and entry of amendments difficult. Substitute claims with lines one and one-half or double spaced on good quality paper are required. See 37 CFR 1.52(b).

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-5, 8, 9 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Hewitt US Patent 4,840,444.

In regard to claim 1, Hewitt discloses (see Figures 1-4) a hologram screen having a transparent member (11) and a hologram film (12) stuck to the transparent member as described in column 2, lines 3-8 and producing image by projecting image-forming light from a projector, wherein said hologram film is a transmission-type hologram film; and a reflector (13, 14) for reflecting the image forming light is arranged on the back surface side of said hologram film.

Regarding claim 2, Hewitt discloses that said hologram film is so arranged as to produce an image on the front surface side of said hologram screen by permitting the image-forming light directly projected from said projector to pass through without causing it to be diffracted, and by diffracting the image-forming light that is reflected by

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said reflector after having passed through said hologram film as shown in Figure 1 and as described in column 2, lines 17-63.

Regarding claim 3, Hewitt discloses that said reflector is arranged between said hologram film and said transparent member as shown in Figures 2 and 4.

Regarding claim 4, Hewitt discloses that said reflector is the one obtained by directly coating said transparent member with a metal or a nonmetal, the one obtained by sticking a metal-coated resin film onto said transparent member, or the one obtained by sticking a metal foil onto said transparent member as described in column 2, lines 22-23 and column 3, lines 1-6.

Regarding claim 5, Hewitt discloses that said transparent member is a resin or a glass as described in column 2, lines 17-32.

Regarding claim 8, Hewitt discloses that said reflector is the one which permits part of the image-forming light to pass through as shown in Figure 1 and as described in column 2, lines 17-63.

Regarding claim 9, Hewitt discloses that said reflector has a light transmission factor of from 20 to 50% or a light reflection factor of from 30 to 60% as described in column 3, lines 14-26.

Regarding claim 13, Hewitt discloses that said reflector is arranged on a portion of said whole hologram film as shown in Figures 1, 2 and 4.

4. Claims 1-3, 5, 7 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Yamate et al Japan 9-329759.

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In regard to claim 1, Yamate et al discloses (see Figure 1) a hologram screen having a transparent member (3) and a hologram film stuck to the transparent member and producing image by projecting image-forming light from a projector, wherein said hologram film is a transmission-type hologram film (2); and a reflector (1) for reflecting the image forming light is arranged on the back surface side of said hologram film.

Regarding claim 2, Yamate et al discloses that said hologram film is so arranged as to produce an image on the front surface side of said hologram screen by permitting the image-forming light directly projected from said projector to pass through without causing it to be diffracted, and by diffracting the image-forming light that is reflected by said reflector after having passed through said hologram film as shown in Figure 1.

Regarding claim 3, Yamate et al discloses that said reflector is arranged between said hologram film and said transparent member as shown in Figure 1.

Regarding claim 5, Yamate et al discloses that said transparent member is a resin or a glass as disclosed in abstract.

Regarding claim 7, Yamate et al discloses that said reflector is the one which totally reflects the image-forming light as shown in Figure 1.

Regarding claim 13, Yamate et al discloses that said reflector is arranged on a portion of said whole hologram film as shown in Figure 1.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hewitt US Patent 4,840,444 in view of Hattori et al US Patent 6,288,803.

Regarding claim 6, Hewitt teaches the invention as set forth above but does not teach a light-scattering film is disposed on the front surface side of said hologram film to scatter the image-forming light.

Hattori et al does teach (see Figure 18) a light-scattering film (12) is disposed on the front surface side of said hologram film to scatter the image-forming light as described in column 9, lines 1-3 and as shown in Figure 18.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the light scattering film of Hattori in the device of Hewitt in order to prevent glare.

7. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hewitt US Patent 4,840,444 in view of Mizutani EP 0935159A2.

Regarding claim 10, Hewitt teaches the invention as set forth above but does not teach that said hologram screen has a reflection-preventing film on at least either the front surface side or the back surface side thereof.

Mizutani does teach (see Figure 1) said hologram screen has a reflection-preventing film (14, 15) on at least either the front surface side or the back surface side thereof as shown in Figure 1.

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It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the reflection-preventing film as taught by Mizutani in the device of Hewitt in order to improve the image contrast.

8. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hewitt US Patent 4,840,444 in view of Official Notice.

Regarding claim 12, Hewitt teaches the invention as set forth above but does not teach that said reflector is detachably attached to said transparent member and to said hologram film. Official Notice is taken that it is notoriously old and well known in the holographic art to have film layers be detachable. It would have been obvious to one having ordinary skill in the art at the time the invention was made to detachably attach the reflector in order to provide for a layer that can be removed and replaced when it is scratched.

Allowable Subject Matter

9. Claim 11 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. Claim 11 is allowable over the prior art for at least the reason that the prior art fails to teach or reasonably suggest the relationship recited by the formula as set forth in the claimed combination.

The prior art of record, Hewitt and Yamate et al teach a hologram screen having a transparent member and a hologram film stuck to the transparent member and producing image by projecting image-forming light from a projector, wherein said

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hologram film is a transmission-type hologram film; and a reflector for reflecting the image forming light is arranged on the back surface side of said hologram film but does not teach the relationship cited by the formula in claim 11 and there is no motivation or teaching to modify this difference as derived.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Smith et al US Patent 5,724,161 teaches a hologram screen having a transparent member and a hologram film stuck to the transparent member and producing image by projecting image-forming light from a projector, wherein: said hologram film is a transmission-type hologram film; and a reflector for reflecting the image forming light is arranged on the back surface side of said hologram film as shown in Figure 7 and as described in column 5, lines 1-7.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alessandro V. Amari whose telephone number is (703) 306-0533. The examiner can normally be reached on Monday-Friday 8:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Dunn can be reached on (703) 305-0024. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

ava *AVA*
August 8, 2003

Mark A. Robinson
MARK A. ROBINSON
PRIMARY EXAMINER